

OUTSIDE AIR TEMPERATURE SENSOR



STTO

STTO221, STTO222, STTO223, STTO224

Application

"STTO" outside air temperature sensor is intended for sensing outside air temperature and it also can sense radiant heat and low-high temperature of atmosphere.

Units contain either a high quality platinum or thermistor sensing element suitable for use in the range -35 ~ +80°C.

Technical Data

MODEL	ELEMENT	RANGE	ACCURACY	WIRE	SUITABLE
STTO221	Pt100Ω	-35 ~ 80°C	±0.15°C (at 0°C)	3wire/ 1.0mm ²	
STTO222	Pt1000Ω	-35 ~ 80°C	±0.3°C (at 0°C)	3wire/ 1.0mm ²	
STTO223	NTC3KΩ	-35 ~ 80°C	±0.2°C (at 25°C)	3wire/ 1.0mm ²	
STTO224	NTC10KΩ	-35 ~ 80°C	±0.2°C (at 25°C)	3wire/ 1.0mm ²	

• SENSING TIME	: About 3min(at 0.15m/sec velocity)
• AMBIENT TEMPERATURE	: -35~+80°C
• AMBIENT HUMIDITY	: 5 ~ 95%Rh
• APPLICATION	: DDC System and controller
• CHARACTERISTICS	: Table of Reference Values
• PROTECTION CLASS	: IP 65 to EN60529
• HOUSING MATERIAL	: PC
• WEIGHT	: 150g

Notes

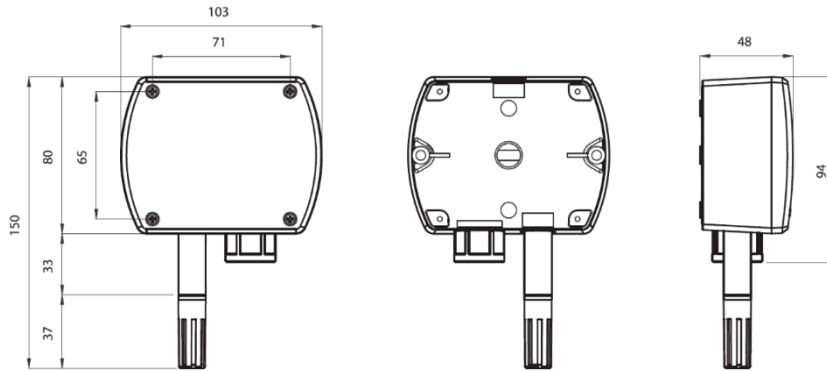
- Select a location approx. 1.5m above the floor for the sensor which is representative of the space to be controlled and where it will be readily affected by change in the general space temperature & humidity level.
- The sensor location should also be reasonably clean and free from damp and condensation and must be installed at the coldest place as north wall generally and prevent from direct sun light. The element must not be touched and should be protected from dust, water, spray, condensation.
 - ▶ Prohibited place for installation: Window, Door, Air ventilation hole, Upper place of heat source, veranda or eaves of roof.
 - ▶ To protect any errors from warm air convection, cable wire should be shielded and sensor must not be painted.
 - ▶ The sensor element must not to be exposed to organic solvents, liquids or sylphid bearing materials.
 - ▶ To avoid the conductive current the wires should be separated from power Line.

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Wiring Diagram



Shape Dimension



Product Data

RESISTANCE CURVE TABLE

Temperature		Pt100	Pt1000	NTC3K (ACI/3K)(22)	NTC10K (Type II)(CP)	NTC10K (Type III)(AN)	Temperature		Pt100	Pt1000	NTC3K (ACI/3K)(22)	NTC10K (Type II)(CP)	NTC10K (Type III)(AN)
Temp	Temp	Resistance	Resistance	Resistance	Resistance	Resistance	Temp	Temp	Resistance	Resistance	Resistance	Resistance	Resistance
	°F	Ω	Ω	Ω	Ω	Ω	°C	°F	Ω	Ω	Ω	Ω	Ω
-40	-40	84.3	843	100.701	332.15	239.78	50	122	119.4	1194	1.081	3.60	3.85
-35	-31	86.2	862	72.658	242.12	179.25	55	131	121.3	1213	896	2.99	3.23
-30	-22	88.2	882	53.196	173.34	135.23	60	140	123.2	1232	747	2.49	2.72
-25	-13	90.2	902	39.190	129.40	102.51	65	149	125.2	1252	625	2.08	2.30
-20	-4	92.2	922	29.162	96.46	79.01	70	158	127.1	1271	526	1.75	1.96
-15	5	94.1	941	21.909	71.25	61.02	75	167	129.0	1290	445	1.48	1.70
-10	14	96.1	961	16.611	54.99	47.55	80	176	130.9	1309	378	1.26	1.43
-5	23	98.0	980	12.705	42.17	37.55	85	185	132.8	1328	322	1.07	1.23
0	32	100	1000	9.800	32.56	29.99	90	194	134.7	1347	275	0.92	1.08
5	41	102.0	1020	7.620	25.34	23.90	95	203	136.6	1366	237	0.79	0.94
10	50	103.9	1039	5.971	19.87	19.03	100	212	138.5	1385	204	0.68	0.81
15	59	105.8	1058	4.713	15.93	15.26	105	221	140.4	1404	177	0.59	0.72
20	68	107.8	1078	3.747	12.49	12.28	110	230	142.3	1423	153	0.51	0.62
25	77	109.7	1097	3.000	10.00	10.00	115	239	144.2	1442	134	0.45	0.54
30	86	111.7	1117	2.416	8.06	8.17	120	248	146.1	1461	117	0.39	0.48
35	95	113.6	1136	1.959	6.53	6.71	125	257	148.0	1480	103	0.34	0.42
40	104	115.5	1155	1.597	5.33	5.55	130	266	149.8	1498	90	0.30	0.37
45	113	117.5	1175	1.310	4.37	4.61	135	275	151.7	1517	80	0.26	0.33
							140	284	153.6	1536	71	0.23	0.30